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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,432	02/07/2001	Sidney Shaw White JR.	ESSI:012D1	6574

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/11/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-4

**Office Action Summary**

Application No.

09/778,432

Applicant(s)

WHITE ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24, 25, 27-30 and 35 is/are rejected.
- 7) ☒ Claim(s) 26, 27, 31-34 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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### ***Specification***

Applicants are reminded that the Specification should be amended to reflect the evolution of the parent application, 09/193,895 into U.S. Patent # 6,218,494.

### ***Claim Objections***

Claim 27 is objected to because it appears to recite the same compound twice. Both compounds have the structural form of an alkyl acetoacetate hence, insofar as L<sup>1</sup> through L<sup>4</sup> all denote the same groups, the two compounds mentioned are equivalent. It is suspected that one of the two formulaic representations was, instead, intended to have the structural makeup of a  $\beta$ -diketone such as acetylacetonate. For the purposes of evaluating the claim against the prior art, it will be assumed that the second compound was supposed to be written as L<sup>3</sup>COCH<sub>2</sub>COL<sup>4</sup>.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 24-25, 27-30, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Bier et al., U.S. Patent # 5,849,414. Bier describes the a method for imparting abrasion-resistant characteristics to a polycarbonate lens by applying a

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coating composition comprised of (i) an organofunctional silane such as, for example, silanes bearing epoxy groups (column 4, lines 50-67 through column 5, lines 1-2), (ii) a trivalent aluminum compound having substituents selected from alkyl groups, alkoxy groups, acyloxy groups, etc. and wherein some of said substituents may be replaced with a chelating ligand (column 5, lines 7-16), and (iii) a metal oxide that exhibits solubility in the reaction medium. In column 6, a more detailed description of the suitable aluminum compounds is provided. Among the aluminum compounds particularly mentioned in column 6, lines 36-45 is aluminum oxalate and *corresponding chelated compounds thereof*. An outline of the appropriate organosilane compounds follows and  $\gamma$ -glycidoxypropyltrimethoxysilane is specifically contemplated in column 7, line 7.

While it is appreciated that the Applicant does not mention the incorporation of a metal oxide, it has been ruled that, the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Molecular Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948)

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("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

As for claim 30, it is preferred that hydrolysis and, subsequently, condensation of the aforementioned components is carried out in a stepwise fashion wherein, initially, a substoichiometric quantity of water is added to form a precondensate. The mixture is cured to completion only after it has been applied to the substrate of interest (in this case a polycarbonate lens of specified chemical constitution).

### ***Allowable Subject Matter***

Claims 26, 31-34, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Bier states in column 10, lines 8-10 that a primer layer may be coated onto the substrate prior to introducing the abrasion-resistant layer but the chemical makeup of said layer is not reported. (Acrylic- and polysiloxane adhesion promoters derived from organofunctional silanes are well known in the art but there doesn't appear to be any particular benefit to employing these compounds in lieu of another tacky material.

### ***Conclusion***

Popall et al., U.S. Patent # 5,360,834 is relevant to the instant invention for their disclosure of sol gel composition that may be cured in a controlled manner by exploiting photoinitiating compounds activated by light radiation that induce changes in the pH of the reaction mixture. A variety of polymerizable materials are mentioned therein as potentially suitable compounds for gel formation including epoxy-functionalized silanes

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and oxalate derivatives of aluminum chelate complexes. However, there is no explicit teaching that these precise compounds should be combined in preparing the target compounds. Further, given the large quantity of compounds described, it would not have been obvious to react these exact compounds since no specific motivation for their combination exists.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Marc S. Zimmer  
AU 1712

April 3, 2002



Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700